CLAIMS

We claim:

1.   A method of data transfer, the method comprising:

transmitting, to an optical network unit (ONU), an indication of a time relative to a current system time;

receiving network data collected at the ONU and associated with the transmitted indication; and

storing the received network data.

2.   The method of claim 1, further comprising:

receiving, from a management system, a request for network data; and

transmitting, to the management system in accordance with the request, at least a portion of the stored network data.

3.   The method of claim 2, wherein the request for network data pertains to a plurality of ONUs.

4.   The method of claim 1, further comprising:

receiving a request to reset network data associated with the ONU; and

deleting at least a portion of the stored network data.

5.   The method of claim 1, wherein the stored network data includes a plurality of bins.

6.   The method of claim 1, wherein the network data is collected and received at 15-minute intervals.

7.   The method of claim 1, wherein the stored network data includes at least one daily counter.

8.   The method of claim 1, further comprising:

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receiving a new system time; and

resetting at least a portion of the stored network data if a difference between the new system time and a current system time exceeds a predetermined value.

9.   The method of claim 8, wherein the resetting includes deleting at least a portion of the stored network data.

10.   The method of claim 1, further comprising maintaining a flag indicative of a validity of the received network data.

11.   The method of claim 1, wherein the ONU comprises an optical network termination (ONT).

12.   The method of claim 1, wherein the network data comprises performance data monitored at the ONU.

13.   The method of claim 1, wherein the received network data is stored locally.

14.   A method of data transfer, the method comprising:

receiving, from an optical line termination (OLT), an indication of a time relative to a current system time;

collecting network data in accordance with the received indication; and

transmitting the collected network data to the OLT.

15.   The method of claim 14, wherein the network data are collected in at least one 15-minute bin.

16.   The method of claim 14, further comprising receiving, from the OLT, a request for network data.

17.   The method of claim 14, further comprising:

receiving, from the OLT, a request to reset network data; and

deleting the collected network data.

18.   The method of claim 14, further comprising maintaining a flag indicative of a validity
of the collected network data.

19.   An optical line termination (OLT) configured to operate in a passive optical network,
the OLT comprising:

a transmitter configured to transmit, to an optical network unit (ONU), an indication of a
time relative to a current system time;

a receiver configured to receive network data collected at the ONU and associated with the
transmitted indication; and

a storage device configured to store the received network data.

20.   The OLT of claim 19, wherein:

the receiver is further configured to receive, from a management system, a request for
network data, and

the transmitter is further configured to transmit, to the management system in accordance
with the request, at least a portion of the stored network data.

21.   The OLT of claim 20, wherein the network data comprises performance data
monitored at the ONU.

22.   The OLT of claim 19, wherein the stored network data includes at least one daily
counter.

23.   An optical network unit (ONU) configured to operate in a passive optical network,
the ONU comprising:

a receiver configured to receive, from an optical line termination (OLT), an indication of a time relative to a current system time;

a data collector configured to collect network data in accordance with the received indication; and

a transmitter configured to transmit the collected network data to the OLT.

24.   The ONU of claim 23, wherein the ONU is configured to maintain a flag indicative of a validity of the collected network data.

25.   A data storage medium having instructions executable by an array of logic elements, said instructions describing a method of data transfer, the method comprising:

transmitting, to an optical network unit (ONU), an indication of a time relative to a current system time;

receiving network data collected at the ONU and associated with the transmitted indication; and

storing the received network data.

26.   The medium of claim 25, the method further comprising:

receiving, from a management system, a request for network data; and

transmitting, to the management system in accordance with the request, at least a portion of the stored network data.

27.   A data storage medium having instructions executable by an array of logic elements, said instructions describing a method of data transfer, the method comprising:

receiving, from an optical line termination (OLT), an indication of a time relative to a current system time;

collecting network data in accordance with the received indication; and

transmitting the collected network data to the OLT.

28.   The medium of claim 27, the method further comprising maintaining a flag indicative of a validity of the collected network data.